

AMENDMENTS TO THE CLAIMS

Please amend the Claims as follows:

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)
11. (Cancelled)
12. (Cancelled)
13. (Cancelled)
14. (Cancelled)
15. (Cancelled)
16. (Cancelled)
17. (Cancelled)
18. (Cancelled)
19. (Cancelled)
20. (Cancelled)
21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

26. (New) A data storage apparatus comprising:

a rotating storage medium driven by a motor;

a printed circuit board to which the motor is mounted; and

a stationary array of carbon nanotube heads mounted to the printed circuit board,

wherein the stationary array of carbon nanotube heads generate a plurality of electron beams for writing data to and reading data from the rotating storage medium, the plurality of electron beams each deflectable to desired tracks of the rotating storage medium.

27. (New) The data storage apparatus of Claim 26, further comprising a monolithic chip on which the stationary array of carbon nanotube heads are formed.

28. (New) The data storage apparatus of Claim 27, wherein the monolithic chip is mounted to the printed circuit board.

29. (New) The data storage apparatus of Claim 27, wherein the monolithic chip extends along a radius of the rotating storage medium.

30. (New) The data storage apparatus of Claim 26, wherein each of the plurality of carbon nanotube heads further comprises a carbon nanotube, a housing surrounding the carbon nanotube, an acceleration electrode mounted at an end of the housing, a deflection electrode interposed between the acceleration electrode and the carbon nanotube, a window sealing the end of the housing, the window transmissive to electrons emitted from the carbon nanotube, and a deflection electrode mounted on a surface of the window, the surface exterior to the housing.

31. (New) The data storage device of Claim 30, wherein each of the plurality of carbon nanotube heads further comprises a gating electrode interposed between the deflection electrode and the carbon nanotube.

32. (New) The data storage device of Claim 30, wherein each of the plurality of carbon nanotube heads further comprises a focus electrode interposed between the deflection electrode and the carbon nanotube.

33. (New) The data storage device of Claim 30, wherein the housing comprises a vacuum housing.

34. (New) The data storage device of Claim 30, wherein the window is formed from boron nitride.

35. (New) A data storage device, comprising:

a rotating storage medium driven by a motor; and

a stationary array of carbon nanotube heads positioned to face a lower surface of the rotating storage medium, the rotating storage medium rotating above the stationary array of carbon nanotube heads,

wherein the stationary array of carbon nanotube heads generate a plurality of electron beams for writing data to and reading data from the lower surface of the rotating storage medium, the plurality of electron beams each deflectable to desired tracks of the rotating storage medium.

36. (New) The data storage apparatus of Claim 35, further comprising a monolithic chip on which the stationary array of carbon nanotube heads are formed.

37. (New) The data storage apparatus of Claim 36, wherein the monolithic chip extends along a radius of the rotating storage medium.

38. (New) The data storage apparatus of Claim 35, wherein each of the plurality of carbon nanotube heads further comprises a carbon nanotube, a housing surrounding the carbon nanotube, an acceleration electrode mounted at an end of the housing, a deflection electrode interposed between the acceleration electrode and the carbon nanotube, a window sealing the end

of the housing, the window transmissive to electrons emitted from the carbon nanotube, and a deflection electrode mounted on a surface of the window, the surface exterior to the housing.

39. (New) The data storage device of Claim 38, wherein each of the plurality of carbon nanotube heads further comprises a gating electrode interposed between the deflection electrode and the carbon nanotube.

40. (New) The data storage device of Claim 38, wherein each of the plurality of carbon nanotube heads further comprises a focus electrode interposed between the deflection electrode and the carbon nanotube.

41. (New) The data storage device of Claim 35, wherein the housing comprises a vacuum housing.

42. (New) The data storage device of Claim 35, wherein the window is formed from boron nitride.